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**REMARKS**

Claims 1-15 are pending in the present application. Claims 1-6 and 12-15 are allowed. Claims 7-11 are rejected.

Reconsideration of the application is respectfully requested in view of the following responsive remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

In the Office Action of March 30, 2007 the following actions were taken:

(1) Claim 7-11 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over International PCT Publication No. WO 02/45971A1 (hereinafter "Payne '971") in view of European Patent No. 0485079 (hereinafter "Henry"); and

(2) Claim 7-11 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 2,545,423 (hereinafter "Duerr") in view of Henry.

It is respectfully submitted that the presently pending claims be allowed based on the remarks below.

**Rejections Under 35 U.S.C. § 103**

The Examiner has rejected claims 7-11 under U.S.C. § 103(a) as being unpatentable over two combinations, Payne '971 in view of Henry and Duerr in view of Henry. The issue under § 103 is whether the PTO has stated a case of *prima facie* obviousness. According to the MPEP § 2142, the Examiner has the burden and must establish a case of *prima facie* obviousness. In order to maintain a *prima facie* case of obviousness by combining references, the prior art must provide some reason or motivation to make the claimed compositions. *In re Dillon*, 16 U.S.P.Q.2d 1897, 1901 (Fed. Cir. 1990). As aptly stated in *In re Jones*, 21 U.S.P.Q.2d 1941, 1943-44 (Fed. Cir. 1992):

"Before the PTO may combine the disclosure of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art... Conspicuously missing from this record is any *evidence*, other than the PTO's speculation (if it be called evidence) that one of ordinary skill in the...art would have been motivated to make the modifications of the prior art necessary to arrive at the claimed (invention)."

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It has been widely recognized that virtually every invention is a combination of elements and that most, if not all, of these will be found somewhere in an examination of the prior art. This reasoning lead the court, in *Connell v. Sears, Roebuck & Co.*, 220 U.S.P.Q. 193, 199 (Fed. Cir. 1983) to state:

"...it is common to find elements or features somewhere in the prior art. Moreover, most if not all elements perform their ordained and expected function. The test is whether the claimed invention as a whole, in light of all the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made."  
(underlining added)

With the above background in mind, the Applicant contends that a *prima facie* case of obviousness with respect to pending claims has not been met. Specifically, the references do not provide sufficient teachings to be modified in order to arrive at Applicant's invention. Further, Applicant contends that the combination of references is based on hindsight. Therefore, without knowledge of the disclosure of the present invention, one of ordinary skill in the art would not be able to make the combinations proposed to arrive at the claimed invention.

The Examiner has rejected claims 7-11 as being obvious over Payne '971, Henry, and Duerr. Although U.S. Patent No. 6,932,466 (hereinafter Payne '466) is not listed in the introductory paragraph for the rejections, Payne '466 has been previously used in prior office actions and is discussed in the Examiner's arguments in the present office action. Thus, a brief discussion of these references is believed to be in order.

*Payne '971 and Payne '466 (collective Payne)*

Payne discloses an ink-jet printing process comprising the steps of applying ink to a substrate and applying a fixing composition that contains a poly(C<sub>3-18</sub>-hydrocarbyl monoguanide). More specifically, Payne teaches (1) the fixing composition is applied in a localized manner; (2) the areas of ink and composition are substantially coextensive; (3) the polymonoguanide contains a plurality of groups represented by Formula 1 and/or 2; (4) the composition contains various percentages of polymer containing monoguanide, binder, water-soluble organic solvent, and water; (5) a substrate printed with an image, (6) a set of liquids suitable for use in an ink jet printer; and (7) an ink jet printer cartridge.

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*Henry*

Henry discloses the use of biguanides in various amounts as an anti-microbial agent. The Examiner alleges that Henry teaches that the biguanide compound is a fixing composition and prevents microorganism growth. However, Henry never mentions the use of biguanide as a fixing composition. In fact, Henry only teaches that biguanide can be used in an aqueous medium to prevent micro-organism growth and gives examples such as cooling water liquors, paper mill liquors, and metal working fluids. Clearly, Henry does not teach biguanide as a fixing composition. Further, the section cited by the Examiner would only add to the amount of chloride present inherently in Payne, thus teaching away from keeping the chloride concentration low.

*Duerr*

Duerr discloses the use of guanide and biguanide compounds to help control dyestuffs from migrating or diffusing into the carrier or substrate. See col. 3, lines 5-20. The compounds are applied in a gelatin or colloid coating. See col. 3, lines 7-8. The guanide and biguanide compounds form insoluble salts. See col. 3, lines 29-37. There is no teaching of polymerization.

Claims 7-11

The Examiner has rejected claims 7-11 over two combinations, Payne in view of Henry and Duerr in view of Henry. However, the present combinations fail to teach each and every element of the pending claim set.

The Examiner has alleged that Payne teaches a melt polymerization of a C<sub>3-18</sub>-hydrocarbyl diamine with a guanidine salt other than guanidine hydrochloride. Even though the Examiner has referred to page 4, lines 8-15, and the examples, a close inspection of Payne reveals that a hydrochloride salt is present. Specifically, page 4, lines 8-15 states that "PMGs may be prepared by the reaction of guanidine hydrochloride with a diamine . . ." (underline added). Also, the examples on page 14, line 30; and page 15, lines 4-12; clearly show that guanidine hydrochloride was used in all of the melt polymerization reactions schemes. Therefore, Payne does not teach a melt polymerization with a with a guanidine salt other than guanidine hydrochloride. Additionally, Henry does not cure this deficiency since Henry only uses biguanides as anti-microbial agents in solvents. To be clear, there is no teaching in

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Henry of melt or solvent polymerizations. Therefore, the Applicant respectfully requests that the Examiner withdraw the present rejection.

The Examiner has also rejected claims 7-11 over Duerr in view of Henry. Duerr teaches the use of guanide and biguanide salts to protect dyestuffs. Contrary to the Examiner's assertion, Duerr does not teach melt or solvent polymerization. The present invention describes such a polymerization on page 3, lines 23-32, of the current specification. Specifically, the polymerization temperature is at least 100°C and preferably in an inert environment. Duerr contains no such disclosure but merely teaches the formation of biguanide and guanide salts in a gelatin or colloid layer. Additionally, as previously discussed, Henry does not teach melt or solvent polymerization. Therefore, as Henry cannot cure the deficiency of Duerr, the Applicant respectfully requests that the Examiner withdraw the present rejection.

Furthermore, the Examiner acknowledges that Payne does not teach that the fixing composition has a chloride concentration less than 400 ppm by weight as recited by claim 10. The Examiner has argued that the chlorine concentration is obvious since "it would have been obvious to one having ordinary skill in the art at the time of invention was made to incorporate chloride concentration less than 400ppm by weight ... since it has been held that it is not inventive to discovering and optimum value or workable ranges by routine experimentation." See Office Action, page 3 and 4. However, based on the state of the cited art, it would have been impossible for one skilled in the art to achieve the present invention since Payne and Duerr use chlorine as part of its composition.

Specifically, Payne uses chlorine salts while the present invention uses non-chlorine salts during polymerization. The absence of chlorine from the polymerization reactions enables the present invention to achieve such minimal chlorine concentrations. A person skilled in the art would never achieve such allegedly "optimum" chlorine concentrations based on the teachings of Payne. Additionally, the teachings of Henry do not cure the deficiencies of Payne. In fact, the combination teaches away from the present claim. The Examiner has combined Payne, which already contains chloride, with the anti-microbial agent of Henry, which is a chloride compound. In other words, the combination adds chloride and the present claim set is directed at minimizing chloride, as claim 10 recites a chloride concentration less than 400ppm.

The combination of Duerr and Henry provide the same results. Duerr refers to U.S. Patent No. 2,149,709 (hereinafter "Rein") for preparation of the guanide and biguanide bases.

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Rein describes the preparation of the reaction using a salt of an amine. The salts disclosed in the Rein patent are all chloride salts. See Example 4, col. 2, lines 5-12; Example 5, col. 2, lines 13-17; Example 6, col. 2, lines 18-24; Example 7, lines 25-30; Example 8, lines 31-35; and Example 9, lines 36-40. As such, the combination of Duerr and Henry also teach away from the present chloride limitation and the Applicant respectfully requests that the Examiner withdraw the present rejections.

In view of the foregoing, Applicants submit that claims 7-11 present allowable subject matter and allowance is respectfully requested. If any impediment to the allowance of these claims remains after consideration of the above remarks, and such impediment could be removed during a telephone interview, the Examiner is invited to telephone the undersigned attorney so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 08-2025.

Dated this 27<sup>th</sup> day of June, 2007.

Respectfully submitted,



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